

D. Remarks

The claims are 1-3 and 6, with claim 1 being the sole independent claim. Claim 1 has been amended to clarify the present invention. Support for this amendment may be found throughout the specification. Reconsideration of the present claims is expressly requested.

Claims 1-3 and 6 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by U.S. Patent No. 5,616,373 (Karner). Claims 1-3 and 6 are also provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-6 of Application No. 11/295,667 in view of Karner. The grounds of rejection are respectfully traversed.

Prior to addressing the merits of rejection, Applicant would like to briefly discuss some of the features and advantages of the presently claimed invention. That invention, in pertinent part, is related to a plasma processing apparatus that has a process chamber, a gas introducing part, a mechanism that arranges the object in a flow of a gas and an exhaust mechanism. The mechanism arranges the object such that it is between the gas introducing part and the plasma generating region in the flow of the gas. As a result of such a structural arrangement, the active-species concentration can be maintained at a low level and an extremely thin film can be formed on the object by the plasma treatment in a stable, controlled manner within a desired time period (see page 15, lines 7-18). The presently claimed apparatus generates microwave excitation surface wave plasma or a microwave excitation surface wave interference plasma.

Karner is directed to a method for producing a diamond coating. In this method, a substrate is placed between a cathode and an anode. Electrically charged carriers

are introduced into the same space and subjected to an arc discharge (col. 3, lines 24-29). Specifically, in the apparatus disclosed in Karner (e.g., Figs. 5 and 6), charged gas particles are introduced into the space housing the substrate and an arc discharge generates plasma in the chamber to treat the substrate. Thus, Karner teaches placing the substrate in the plasma generating region. This arrangement is said to increase the plasma density around the substrate (col. 3, lines 59-61).

To the contrary, as discussed above, the substrate being treated is spaced apart from the plasma generating region in the presently claimed apparatus. The substrate is placed upstream from the plasma generating region, i.e., between the gas introducing part and the plasma generating region. Furthermore, as specified in the present claims, the plasma produced by the apparatus is a microwave excitation surface wave plasma or a microwave excitation surface wave interference plasma, i.e., the presently claimed apparatus is a microwave plasma treatment apparatus. Karner, as mentioned above, produces plasma by an arc discharge and is not a microwave plasma treatment apparatus. Thus, clearly, the apparatus in Karner is different from that presently claimed.

Applicant respectfully submits that the present claims are not a double patenting of the claims in Application No. 11/295,667 at least for the same reasons as those discussed above. Specifically, the Examiner has relied on Karner for the disclosure of the internal arrangement of components in the apparatus. However, Karner does not disclose or suggest that arrangement.

Wherefore, withdrawal of the outstanding rejections and passage of the application to issue are respectfully requested.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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